

## FORM U-1 MANUFACTURERS' DATA REPORT FOR PRESSURE VESSELS

As required by the Provisions of the ASME Code Rules, Section VIII, Division I

1. Manufactured by Joseph Oat & Sons, Inc. Camden, New Jersey  
(Name and address of Manufacturer)

2. Manufactured for Hercules, Incorporated Wilmington, North Carolina  
(Name and address of Purchaser)

3. Type Vert. Kind Heat Exch. Vessel No. (2158-2) ( ) Natl. Bd. No. 650 Yr. Built 1973  
(Horiz. or Vert.) (Tank, Jacketed, Heat Exch.) (Mfrs. Serial) (State & State No.)

Items 4-9 incl. to be completed for single wall vessels (such as air tanks), jackets of jacketed vessels, or shells of heat exchangers.

4. SHELL: Material SA285GRC T.S. 55000 Nominal Thickness 5/16" Corrosion Allowance 1/16" In. Diam. 2 Ft. 0 In. Length 9 Ft. 11-7/8"  
(Kind and Spec. No.) (Fig. or F.B. & Spec. Min. T.S.)

5. SEAMS: Long DBW H.T. No R.T. Spot Sectioned No Efficiency 85 %  
(Welded, Dbl., Single, Lap, Butt) (Yes or No)<sup>1</sup> (Spot or Complete) (Yes or No)

6. HEADS (a) Material SA285GRC T.S. 55000 (b) Material Same T.S. 55000  
Location Top, bottom, ends Thickness 5/16" Crown Radius None Knuckle Radius None Elliptical Ratio None Conical Apex Angle None Hemispherical Radius None Flat Diameter 28 Side to Pressure (Convex or Concave)

If removable, bolts used SA193 B7 28 3/4" 10UNC Other fastening None  
(Material, Spec. No., T.S., Size, Number) (Describe or Attach Sketch)

7. STAYBOLTS: None If hollow None Attachment None Pitch None X None Diam. None  
(Material) (Size of Hole) (Threaded, Welded) (Horiz.) (Vert.) (Nominal)

8. JACKET CLOSURE: None  
(Describe as ogee & weld, bar, etc. If bar, give dimensions, if bolted, describe or sketch)

9. Constructed for max. allowable working press<sup>2</sup> 175 psi at max. temp. 375 °F. Min. Temp. (when less than -20°) None °F. Test Press 262.5 psi.  
Hydrostatic Pneumatic or Combination

Items 10 and 11 to be completed for tube sections.

10. TUBE SHEETS: Stationary. Material SA240T304 Diam. 24 In. Thickness 1-3/16" Attachment Welded  
(Kind & Spec. No.) (Subject to Pressure) (Welded, Bolted)

11. TUBES: Material SA249TP304 O.D. 3/4 In. Thickness 18 Gauge Number 512 Type Straight  
(Kind & Spec. No.) (Straight or U)

Items 12-15 incl. to be completed for inner chambers of jacketed vessels, or channels of heat exchangers.

12. SHELL Material SA240T304 T.S. 75000 Nominal Thickness 3/16" Corrosion Allowance 0 In. Diam. 2 Ft. 0 In. Length 1 Ft. 8 In.  
(Kind and Spec. No.) (Fig. or F.B. & Spec. Min. T.S.)

13. SEAMS: Long DBW H.T. No R.T. Spot Sectioned No Efficiency 85 %  
(Welded, Dbl., Single, Lap, Butt) (Yes or No)<sup>1</sup> (Spot or Complete) (Yes or No)

14. HEADS (a) Material SA285GRC T.S. 55000 (b) Material Same T.S. 55000 (c) Material Same T.S. 55000  
Location Top, bottom, ends Thickness 5/16" Crown Radius None Knuckle Radius None Elliptical Ratio None Conical Apex Angle None Hemispherical Radius None Flat Diameter 28 Side to Pressure (Convex or Concave)

If removable, bolts used (a) SA193 B7 28 3/4" 10UNC (b) SA193 B7 28 3/4" 10UNC  
(Material, Spec. No., T.S., Size, Number)

(c) None Other fastening None  
(Describe or Attach Sketch)

15. Constructed for max. allowable working press<sup>2</sup> 75 psi at max. temp. 375 °F. Min. temp. (when less than -20°) None °F. Test Press 1125 psi.  
Hydrostatic Pneumatic or Combination

Items below to be completed for all vessels where applicable.

16. SAFETY VALVE OUTLETS: Number None Size None Location In Piping

17. NOZZLES  
Purpose (Inlet, Outlet, Drain) Number Diam. or Size Type Material Thickness Reinforcement Material How Attached

Purpose (Inlet, Outlet, Drain)	Number	Diam. or Size	Type	Material	Thickness	Reinforcement Material	How Attached
A-B	2	4"	Pipe	SA312T304	SCH 40	None	Welded
C-D	2	4"	"	SA53GRB	"	"	"
H	1	6"	"	SA312T304	"	"	"

<sup>1</sup> If postweld heat-treated.

<sup>2</sup> List under remarks other internal or external pressures with coincident temperature when applicable.

FORM U-1 (back)

18. INSPECTION Manholes, No. \_\_\_\_\_ Size \_\_\_\_\_ Location \_\_\_\_\_  
 OPENINGS: Handholes, No. \_\_\_\_\_ Size \_\_\_\_\_ Location \_\_\_\_\_  
 Threaded, No. 2 - 1 Size 3/4" - 1" Location Shell & Cover Shell  
 19. SUPPORTS: Skirt No Lugs 4 Legs \_\_\_\_\_ Other \_\_\_\_\_ Attached Welded  
 (Yes or No) (Number) (Number) (Describe) (Where & How)

20. REMARKS: Vessel is a DMT Loading Condenser constructed to Oat Dwg. 5336-4 and  
the 1971 ASME Code Section VIII.

Equipment No. E-6550-4

(Brief description of purpose of the vessel, as Air Tank, After Cooler, Jacketed Cooker, etc. State contents of each part.)

We certify that the statements made in this report are correct and that all details of design, material, construction, and workmanship of this vessel conform to the ASME Code for Pressure Vessels, Section VIII, Division 1.

Date 5/11 19 73 Signed Joseph Oat & Sons, Inc. BY Andie Christensen  
 (Manufacturer)

Certificate of Authorization No. 184 Expires 12/31/73

CERTIFICATE OF SHOP INSPECTION

VESSEL MADE BY Joseph Oat & Sons, Inc. at Camden, New Jersey

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province N. J. and employed by Royal Indemnity Company of New York, New York have inspected the pressure vessel described in this manufacturer's data report on 1973, and state that to the best of my knowledge and belief, the manufacturer has constructed this pressure vessel in accordance with the applicable sections of the ASME Boiler and Pressure Vessel Code.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the pressure vessel described in this manufacturer's data report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date 5/11 19 73

Inspector's Signature

Commissions N.B. 6900  
 Nat'l Board, State, Province and No.

CERTIFICATE OF FIELD ASSEMBLY INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province \_\_\_\_\_ and employed by \_\_\_\_\_ of \_\_\_\_\_

\_\_\_\_\_ have compared the statements in this manufacturer's data report with the described pressure vessel and state that parts referred to as data items \_\_\_\_\_, not included in the certificate of shop inspection have been inspected by me and that to the best of my knowledge and belief the manufacturer has constructed and assembled this pressure vessel in accordance with the applicable sections of the ASME Boiler and Pressure Vessel Code. The described vessel was inspected and subjected to a hydrostatic test of \_\_\_\_\_ psi.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the pressure vessel described in this manufacturer's data report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date \_\_\_\_\_ 19 \_\_\_\_\_

Inspector's Signature Commissions \_\_\_\_\_  
 Nat'l Board, State, Province and No.